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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,089	12/15/2000	Paul C. Rentmeester	D-2685/WOD	9645

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EXAMINER	
KOSOWSKI, ALEXANDER J	
ART UNIT	PAPER NUMBER
2125	10

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/738,089	Applicant(s) RENTMEESTER ET AL.	
	Examiner Alexander J Kosowski	Art Unit 2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/15/03*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) *12-17 and 22-40* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 18-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 December 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1) Claims 1-11 and 18-21 are presented for examination in light of the amendment filed 12/15/03.

Claim Rejections - 35 USC § 103

2) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3) Claims 1-11 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnum further in view of Stege (U.S. Pat. 6,044,857).

Referring to claim 1, Barnum discloses a flow control device comprising a housing (col. 4 lines 50-56 and Figure 2, whereby the master status controller and master status panel are mounted in an enclosure), a controllable valve (col. 2 lines 56-64), a controller operably connected to the actuator and providing control signals thereto (col. 3 lines 60-62), an external communications system operably connected to the controller and providing control signals thereto (col. 2 line 66 through col. 3 line 4), a magnetically actuated sensor operatively connected to the controller and providing a first signal thereto in response to the movement or presence of a magnetic field (col. 12 lines 24-35), and a magnetic actuator external of the housing for generating the magnetic field (col. 12 lines 24-35, whereby each push button switch is external of the housing and is associated with a Hall sensor and therefore must contain an actuator capable of generating a magnetic field to trigger the Hall sensor (e.g. a magnet). However, Barnum does not explicitly teach that the valve is located within the housing, nor that

an actuator portion is also located in the housing and is operably connected to and positions the valve.

Stege (U.S. Pat 6,044,857) teaches a flow control device comprising an actuator operably connected to a valve, the actuator being used to position the valve in response to control signals from a controller (col. 4 lines 9-16), whereby the valve and the actuator and a controller are located within a housing (col. 3 lines 44-56 and Figure 1).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize an actuator to position a valve and to locate both the valve and the actuator in a housing along with a controller in the device taught by Barnum since an actuator of some type is required to open or close a valve plug in a valve in response to electrical signals (Stege, col. 4 lines 9-16), and since locating both the valve and actuator in the same housing as a controller would allow a microprocessor to monitor and control the position of a single specific valve (Stege, col. 2 lines 19-27) and a housing would allow control circuits and actuators to be securely held (Stege, col. 4 lines 5-8). In addition, while Barnum does not specifically state the controllable valves may be located within the local controller housing, the examiner notes that the valves and their associated actuators could be located anywhere (e.g. remotely or locally) and their location would not change the functionality of the system.

Referring to claim 2, Barnum discloses that the controller positions the actuator in response to receiving a first signal from the sensor (col. 12 lines 22-35, whereby a valve may be operated in response to a signal from the Hall sensor).

Referring to claim 3, Barnum discloses that the controller transmits a second signal on the communication system in response to receiving the first signal (col. 2 lines 62-65).

Referring to claim 4, Barnum discloses that the controller does not transmit the second signal if the controller determines that the controller has an identity (col. 9 lines 2-14, whereby each controller may be assigned an identity, and whereby a controller may not send status reports if it has a certain identity.)

Referring to claim 5, Barnum discloses that the magnetically actuated sensor is a Hall effect sensor (col. 12 lines 27-28).

Referring to claim 6, Barnum discloses a flow control device comprising a housing (col. 4 lines 50-56 and Figure 2, whereby the master status controller and master status panel are mounted in an enclosure), a valve and controller circuitry operatively connected to the valve to control a position of the valve in response to first condition (col. 2 lines 56-64), a magnetically actuated sensor operatively connected to the control circuitry for detecting a magnetic field and initiating a control mode sequence in the control circuitry (col. 12 lines 15-35), and a magnetic actuator external of the housing for generating a magnetic field (col. 12 lines 24-35, whereby each push button switch is external of the housing and is associated with a Hall sensor and therefore must contain an actuator capable of generating a magnetic field to trigger the Hall sensor (e.g. a magnet). However, Barnum does not explicitly teach that the valve is located within the housing.

Stege (U.S. Pat 6,044,857) teaches a flow control device whereby a valve and a controller are located within a housing (col. 3 lines 44-56 and Figure 1).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to locate a valve in the same housing as a controller since this would allow a microprocessor to monitor and control the position of a single specific valve (Stege, col. 2 lines

19-27) and a housing would allow control circuits and valves to be securely held (Stege, col. 4 lines 5-8). In addition, while Barnum does not specifically state the controllable valves may be located within the local controller housing, the examiner notes that the valves could be located anywhere (e.g. remotely or locally) and their location would not change the functionality of the system.

Referring to claim 7, Barnum discloses that the controller positions the valve in response to the control mode sequence being initiated (col. 2 lines 58-62 and col. 12 lines 15-35).

Referring to claim 8, Barnum discloses communications circuitry in the control circuitry wherein the communications circuitry is operatively connected to a communications bus for two-way communications (col. 2 lines 60-65).

Referring to claim 9, Barnum discloses that the control circuitry sends a first signal to the communications circuitry in response to the initiation of the control mode sequence (col. 2 lines 62-65).

Referring to claim 10, Barnum discloses that the controller does not transmit the second signal if the controller determines that the controller has an identity (col. 9 lines 2-14, whereby each controller may be assigned an identity, and whereby a controller may not send status reports if it has a certain identity.)

Referring to claim 11, Barnum discloses that the first condition is a command from a remote controller (col. 12 lines 15-27).

Referring to claim 18, Barnum discloses a housing (col. 4 lines 50-56 and Figure 2, whereby the master status controller and master status panel are mounted in an enclosure), a flow control device with a controller which controls a valve in response to a first condition (col. 2

lines 56-64), a magnetically actuated sensor operably connected to the controller and providing a signal to the controller in response to sensing the presence or absence of a magnetic field wherein the controller initiates a predetermined control sequence in response to the sensed presence of a magnetic field (col. 12 lines 15-35), and a magnetic actuator external of the housing for generating the magnetic field (col. 12 lines 24-35, whereby each push button switch is external of the housing and is associated with a Hall sensor and therefore must contain an actuator capable of generating a magnetic field to trigger the Hall sensor (e.g. a magnet)). However, Barnum does not explicitly teach that an actuator is located within the housing.

Stege (U.S. Pat 6,044,857) teaches a flow control device comprising an actuator operably connected to a valve, the actuator being used to position the valve in response to control signals from a controller (col. 4 lines 9-16). Stege also teaches that the actuator is located within a housing (Figure 1).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize an actuator in a housing to position the valve in the device taught by Barnum since an actuator of some type is required to open or close a valve plug in a valve in response to electrical signals (Stege, col. 4 lines 9-16), and since a valve controller housing would allow control circuits and actuators to be securely held (Stege, col. 4 lines 5-8).

Referring to claim 19, Barnum discloses that the magnetically actuated sensor is a hall effect sensor (col. 12 lines 27-28).

4) Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnum and Stege, further in view of Deshautreaux (U.S. Pat 3,205,323).

Referring to claim 20, Barnum and Stege disclose the flow control device shown above. However, they do not explicitly teach that the magnetically actuated sensor includes a magnetically moveable object.

Deshautreaux discloses a magnetically actuated sensor which includes a magnetically moveable object (col. 4 lines 42-55, whereby a magnetically actuated switch may be considered a type of sensor).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include a magnetically moveable object in the magnetically actuated sensor taught by Barnum and Stege since the use of a magnetically moveable object in a sensor would allow a sensor to be actuated without physical contact (Deshautreaux, col. 1 lines 27-29), and since it would allow actuation of a switch independent of any external power supply (Deshautreaux, col. 2 lines 3-5).

Referring to claim 21, Barnum discloses that the controller includes circuitry operatively connected to and communicating with a communications bus and wherein the predetermined control sequence includes the transmission of a signal on the communications bus using the control circuitry (col. 2 lines 60-65).

Conclusion

5) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander J Kosowski whose telephone number is 703-305-3958. The examiner can normally be reached on Monday through Friday, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 703-308-0538. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. In addition, the examiner's RightFAX number is 703-746-8370.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Alexander J. Kosowski
Patent Examiner
Art Unit 2125

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100